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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Georg Eggers

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EXAMINER

RAHMAN, FAHMIDA

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/801,130	Applicant(s) EGGERS ET AL.	
	Examiner FAHMIDA RAHMAN	Art Unit 2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to communications filed on 8/6/08.
2. Claims 1, 12, 13, 16 have been amended.
3. No claims have been cancelled.
4. Claim 20 has been added.
5. Thus, claims 1-20 are pending.

Claim Objections

Claims 16-20 are objected to because of the following informalities:

Claim 16 recites "the signal generator" in line 6, which lacks antecedent basis.

For the rest of the action, it is assumed that "the signal generator device" is intended.

Claim 20 recites "the signal" in line 4, which lacks antecedent basis. For the rest of the action, it is assumed that "the signal generator" is intended.

Claims 17-19 depend on claim 16. Therefore, they incorporate the same informalities by virtue of dependency.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-4, 6-7, 11-20 are rejected under 35 USC 102 (b) as being anticipated by Harvey (US Patent 5734285).

For claim 1, Harvey teaches the following limitations:

A system, comprising: a signal generator (150 in Fig 38) coupled to an input of a signal line (52) at a first end, the signal generator generating a signal (CKD) of a particular frequency (CKD is the driver clock signal mentioned in line 20 of column 16. Therefore, it has a particular frequency); at least one receiving device (148 and 142) coupled to the signal line (148 is coupled to 52) at a second end, the second end opposite the first end, wherein the at least one receiving device comprises a clock generator (148 comprises divide by N counter, which divides clock CKR to produce another clock LF as mentioned in lines 65-67 of column 15. Therefore, 148 can be considered as a clock generator) wherein the clock generator is synchronized to the signal (LF is synchronized to CKD as it is generated from CKR, which is generated from CKD) and generates a clock signal (LF is a clock signal, whose frequency is CKR/N), wherein the clock signal comprises a frequency less than a frequency of the signal of a particular frequency (LF's frequency

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is less than the frequency of CKD, since CKD may have same frequency as CKR as mentioned in lines 25-30 of column 16); and an impedance element (58) coupled to the signal line (52) at the first end, the impedance element comprising an impedance chosen to create a resonant condition at the input of the signal line (58 is a resonating circuitry), wherein the resonant condition comprises a resonant frequency that essentially coincides with the frequency of the signal (frequency of CKR is essentially same as frequency of CKD).

For claim 2, Fig 31 shows that CKR is sinusoid. As CKD may be same clock as CKR, CKD is also sinusoid. Lines 50-60 of column 8 mention that the CKR is sinusoid when only inductive component is used.

For claim 3, 150 is a driver.

For claim 4, Fig 33 shows CKD can be almost rectangular.

For claims 6 and 7, 62 shows an implementation of resonator comprising inductive and capacitive components.

For claim 11, counter is a semiconductor component.

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For claim 12, the signal is used for generating clock, which is further used to co-ordinate data transfer in 14.

For claim 13, VC is the further signal. This signal is used to generate CKR, which is used to co-ordinate data transfer in 14.

For claim 14, VC represents the frequency difference and therefore, has lower frequency than CKD/CKR.

For claim 15, 140 is a PLL (lines 63-66 of column 15). Therefore, 142, 148 are part of PLL. Therefore, they can be considered as PLL circuit.

For claim 16, Harvey teaches the following limitations:

A process for generating a synchronizer, the process comprising:

- transmitting signal (CKD) from a signal generator device (150) coupled to a signal line (52) at a first end to at least one receiving device (148 and 142) coupled to the signal line at a second end in an electronic system (Fig 38), the second end opposite the first end, wherein the signal line (52) comprises a capacitive load (CPI is the capacitive load in Fig 38);

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- coupling at least one additional device (58) at an output of the signal generator, the at least one additional device comprising an impedance such that a resonant oscillatory condition is created at an output of the signal generator (58 is a resonating circuit with inductance/capacitance to create a resonance in 146);
- adjusting a center frequency of the resonant oscillatory condition (CKR is adjusted to produce resonance), wherein the center frequency modified to essentially coincide with a frequency of the signal (depending on the circuit component CKD and CKR can be same; lines 24-27 of column 16);
- generating a clock signal (LF) synchronized to the signal (LF is produced from CKD. Thus it is synchronized to the signal), wherein a frequency of the clock signal is less than the frequency of the signal, wherein the clock signal is generated by at least one receiving device (LF has lower frequency than CKD/CKR. LF is produced by 148).

For claim 17, Fig 14 shows the switches coupled to the resonating circuit to on/off the device.

For claim 18, capacitors are implemented with capacitive diode (lines 20-21 of column 17).

For claim 19, Fig 13 shows a design where two devices are in parallel.

For claim 20, Harvey teaches the following limitations:

A system, comprising:

- a first integrated circuit (VFO 146 in Fig 38) comprising
- a signal generator (150 in Fig 38) coupled to an output terminal of the first integrated circuit (150 is coupled to output terminal of 146 as shown in Fig 38), the signal generator generating a signal (CKD) of a particular frequency (CKD is the driver clock signal mentioned in line 20 of column 16. Therefore, it has a particular frequency),
- and an impedance element (58) coupled to the output terminal of the first integrated circuit (Fig 38), the impedance element comprising an impedance (lines 50-60 of column 16) chosen to create a resonant condition at the output terminal (58 is a resonating circuitry), wherein the resonant condition comprises a resonant frequency that essentially coincides with a frequency of the signal of the particular frequency (frequency of CKR is essentially same as frequency of CKD; lines 25-30 of column 16);
- a second integrated circuit (148, 142) comprising a receiving device (148) coupled to an input terminal of the second integrated circuit (Fig 38), wherein the receiving device comprises a clock generator (148 comprises divide by N counter, which divides clock CKR to produce another clock LF as mentioned in

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- lines 65-67 of column 15. Therefore, 148 can be considered as a clock generator), wherein the clock generator is synchronized to the signal (LF is synchronized to CKD as it is generated from CKR, which is generated from CKD) and generates a clock signal (LF is a clock signal, whose frequency is CKR/N), and wherein the clock signal comprises a frequency less than the frequency of the signal of the particular frequency (LF's frequency is less than the frequency of CKD, since CKD may have same frequency as CKR as mentioned in lines 25-30 of column 16);
- and a signal line (signal line connected between 52 and 148 in Fig 38) comprising a first end and a second end (end connected to 52 is the first end), the second end opposite the first end (end connected to 148 is the second end, which is opposite to first end), wherein the first end is coupled to the output terminal of the first integrated circuit (Fig 38 shows that end connected to 52 is coupled to output of 146), and the second end is coupled to the input terminal of the second integrated circuit (Fig 38 shows that end connected to 148 is coupled to input of 148, 142).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5, 8, 9, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harvey (US Patent 5734285).

For claim 5, the discussion related to Fig 38 does not mention about filtering the rectangular signal to produce a sinusoid signal. However, Fig 15 shows the waveform of P1 as rectangular, which is output of 66, the part of driver. If the resonating section only comprises inductor, then the output waveform is sinusoid. Therefore, the design can include a filter in resonating section to produce a sinusoid from a rectangular signal.

For claim 8, Harvey does not explicitly mention that capacitance is set during manufacture. Examiner takes an official notice that setting capacitance during manufacture is well known in the art. One ordinary skill would be motivated to set it depending on the design choice.

For claim 9, line 4 of column 9 mentions that inductor is variably adjusted.

For claim 10, note lines 20-21 of column 17.

Response to Arguments

Applicant's arguments filed on 8/6/08 have been fully considered but they are not persuasive.

Applicant argues that Harvey does not teach the limitations "a signal generator device coupled to a first end of a signal line" and "a receiving device coupled to the signal line at a second end". Harvey clearly showed in Figure 38 that block 148 is coupled to the same end of signal line 52 as block 150.

Examiner disagrees. Signal generator device 150 is coupled to first end of signal line 52 via 58 as shown in Fig 38. Receiving device 148 is coupled to at the second end of 52 via a connecting wire from 52 to 148.

Official notice taken but not argued by the applicant is considered as admitted prior art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fahmida Rahman whose telephone number is 571-272-8159. The examiner can normally be reached on Monday through Friday 8:30 - 5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on 571-272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Fahmida Rahman
Examiner
Art Unit 2116

/Nitin C. Patel/
Primary Examiner, Art Unit 2116